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XXX. *An Account of an extraordinary acephalous Birth.*

By W. Cooper, M. D. in a Letter to William Hunter,
M. D. F. R. S.

DEAR SIR,

Redde, April 27,
1775.

I TAKE the liberty to remit you an account of the delivery of a very curious acephalous monster, accompanied with a short description of its anatomical structure. If, after a perusal of it, you should apprehend it may be acceptable to the Royal Society, I beg that you will do me the honour to lay it before them.

Mrs. BRACKETT, of Clerkenwell Close, aged twenty-three years, was, at the end of her first pregnancy, by a natural labour, delivered of a perfect female child, on Friday the 8th of October, 1773, at seven o'clock in the morning. The attending midwife, Mrs. AYRES, soon perceived by the abdominal tumour that there was another child. After waiting about three hours, a flooding came on; but without pain, or any advancement of the second delivery. The *hæmorrhage* producing faintness, debility, and danger, the attendants and midwife were alarmed, and I was sent for. When I came, I found her in the situation above described; and therefore

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thought it my duty to accomplish the remaining part of the labour, as soon as I could, consistently with the safety of the mother. Upon all occasions, when the concomitant circumstances render it necessary to turn a child *in utero*, it is of the utmost consequence, to understand, as nearly as we can, its general situation, in order to deliver with the greater ease, safety, and expedition. And to an experienced *accoucheur*, if the breech, knees, or feet, do not immediately present themselves, the head and face of the child will, in most cases, be a sufficient index to the position of the other parts of its body. This circumstance arises from the *fœtus* commonly coiling itself up into an oblong, oval, snug, compact figure, with its knees towards its chin, in order to take up as little room as possible, by being adapted to the cavity of the *uterus*. In the present case, when the patient was placed in a proper situation, having introduced my hand as gently as possible through the *vagina, cervix uteri*, and enveloping membranes, and no part of the inferior extremities, or breech, presenting itself, I examined carefully for the head of the child, as usual, but without success. This disappointment somewhat embarrassed me. But as the woman's situation was become very serious by the increasing *uterine hæmorrhage*, I attempted without delay to get at the feet. I easily secured one of them; but though I made use of very little force in bringing it towards the *os externum*, the structure was so very tender that the *tibia* began to give way at its superior *epiphysis*. On this account I was reduced to the disagreeable neces-

fity of again introducing my hand into the *uterus*; and as one leg had thus unexpectedly failed me, I thought it extremely futile to attempt any thing with the other. The most eligible resource which I apprehended I had now left, was to fix a blunt hook upon one groin, and, when it was brought low enough, to assist gently at the other, with the two fore-fingers of my right hand. By these means I happily accomplished the delivery of the remaining *fœtus*, which proved to be a very singular kind of monster. And as the late ingenious Mr. HEWSON injected its blood vessels, and dissected it, I am enabled to attempt a short anatomical description of it, for the satisfaction of the curious in philosophy and physiology.

This extraordinary animal production is of the size and appearance of a common twin child at its full time, excepting the particularities now to be pointed out. When first born it was very plump, but soft and flabby, and the bones remarkably small and tender. It has neither head, neck, hands, or arms. In the place where the neck should originate, is a little *mamilla*, somewhat larger than a woman's nipple, but quite soft. And on each side, in the place where the arm should begin, there is a small *papilla*, about the bigness, and very much like the extremity, of a common quill. The spine seems perfect, but ends abruptly at the upper *vertebræ colli*. Below the navel the parts are nearly intire, except the feet, where the toes are of an irregular form and size, and some of them united together. The external parts of generation, which indicate it a female, are also perfect.

Upon a careful inspection internally, there is evidently no brain nor spinal marrow. A few nerves, however, are scattered about the *abdomen*; but their origin, for fear of destroying the preparation, is not traced. The *uterus* is perfect; but only one *ovarium* could be found. There is also the appearance of a bladder; but it is so contracted as to have no cavity. A large intestine arises from the *anus*; is a good deal convoluted when it gets above the brim of the *pelvis*, and ends in a blind pouch or *cul de sac*, on the left side of the *abdomen*. This *viscus* appears to be about six or seven inches in length; varies its size in different parts, gradually becomes smaller towards its superior extremity, and seems fully distended with a colourless *mucus*^(a). All above the navel is extremely defective. There is no heart, lungs, diaphragm, stomach, liver, kidneys, spleen, *pancreas*, nor small intestines. However, there are three small glands in the place of the *thymus*, whose substance, when examined with a microscope, Mr. HEWSON remarked, exactly resembled that of the *thymus* itself. And on each side of the *vena cava*, just under the navel, are two little glandular substances, which seem to be somewhat like *capsule renales*, only very small to what are commonly

(a) Does not this circumstance almost amount to a proof, that the *meconium*, universally found in the bowels of new-born children, is nothing more than the *mucus* naturally secreted by the intestinal glands, mixed with bile, and perhaps a small portion of the *pancreatic* juice? In the present instance, as there is no liver there could be no bile, and consequently the *meconium*, if I may so call it, is colourless.

found^(b). There is a large artery running upon the spine, which may be called the *aorta*. As this approaches the upper extremity of the little animal, it is divided into smaller and smaller branches; and in its course it distributes lateral ones also to the contiguous parts of the trunk. Below the navel it sends off two branches that constitute the umbilical arteries, one of which is considerably larger than the other. And then below these, two other branches descend to the inferior extremities. A large umbilical vein comes in at the navel, and is immediately divided into two considerable branches; one ascending, the other descending. Each of these is again sub-divided into smaller and smaller branches, which, as they pass upwards and downwards, seem to correspond with the different ramifications of the ascending and descending *aorta*. The *funis umbilicalis* was only about two inches in length^(c), and so very tender also, that it unavoidably separated near the navel of the child during the delivery. Whether, therefore, there was any pulsation in this short *funis* I am not able to determine. The *placenta* was not particularly examined.

(b) Mr. HEWSON, some time before his death, seemed to be confirmed in the opinion, that whenever children are born with little or no brain, the *capsulæ renales* are always very much diminished. This is certainly the case in one or two almost brainless children which I have by me, and whose *renal capsulæ* he examined, with a view of being further satisfied upon this subject.

(c) An exactly similar circumstance to this I took particular notice of, in the delivery of another almost brainless monster.

Here

Here are evidently in this *fœtus* two distinct systems of vessels, arteries and veins^(d), that carried red blood^(e). It is plain also, that the blood passed from the internal *iliac* arteries, through the *hypogastrics* and *umbilicals* to the *placenta*, and was returned from it by the umbilical vein to the navel, and thence distributed in the manner before observed. But as there is no heart, nor any thing analogous to one, it becomes extremely difficult to ascertain the powers by which the circulation was carried on through this curious physiological phænomenon. May we not however venture to advance a conjecture, that the peristaltick, or living muscular power of the arteries, was principally subservient to this important end! Many examples are to be met with in the collections of the curious and learned in the different parts of Europe^(f), which

(d) Mr. HEWSON attempted to inject the whole blood vessels by the umbilical vein as usual. To his great surprize, no part of the injection returned by the umbilical arteries. He could not account for this singularity at that time: but as only a part of the vessels were filled, he injected afresh by one of the *hypogastric* arteries. Upon dissection afterwards, this mystery was unravelled by the heart's being totally absent. It then appeared also, that by the first injection he had filled the venal system, and by the latter the arterial.

(e) See a very curious case related by Monsr. WINSLOW, in the *Memoires de L'Académie des Sciences* for 1740, p. 586. and 604. Among other remarkable singularities in this little monstrous abortion of six months, that excellent anatomist particularly takes notice, that there was no appearance of one drop of red blood in any of its vessels, which were universally filled with a serous lymph; and that there were no vestiges of any veins at all.

(f) F. LICETUS, de Monstribus, p. 300. et seq. PALFYN, *Traité des Monstres*, p. 325. CHESELDEN's *Anatomy*, 5th ed. p. 379. *Philosophical Transactions*, 1739-40, N° 456. p. 303. Ibid. 1767, p. 1. *L'Académie des Sciences, Hist.* 1720,

which are somewhat similar to that now related. When carefully examined, however, excepting a very few instances, they are generally found either essentially to differ, or else their structure has not been, with any tolerable precision, explained. The present history affords also an exception to a frequent remark among authors, "That brainless children are always very brisk before they are born^(g);" for the mother has frequently told me, "That she felt no motion at all within her after the first birth; and that she had not the least suspicion of there being a second child till it was delivered." This circumstance may however, perhaps, be attributed to the *medulla spinalis* being totally deficient, as well as the *cerebrum* and *cerebellum*.

Physiologists and philosophers have spent a great deal of time in attempting to investigate the causes of these extraordinary phænomena. With this view many opinions have been started; but most, if not all of them, as far as I am able to judge, being built upon the tottering basis of conjecture only, afford, upon an attentive inspection, but little satisfaction to a dispassionate enquirer after truth. The particular hypothesis, which has been almost universally adopted, is, that monstrosity and marks in children depend upon the imagination and

1720, p. 13. Ibid. Mem. 1720, p. 8. Ibid. 1740, p. 586. and p. 592. Miscellanea Curiosa Ephemeridum Germanicarum Ann. XIX. p. 258. Acta Eruditorum Lipsiæ, Ann. 1724, p. 501.

(g) Philosophical Transactions, 1674, N° XCIX. p. 6157. Ibid. 1767, p. 18.

longing of the mother. Such pernicious a principle as this ought to have very rational evidence, and the most striking facts to support it. But is it not directly the contrary? Indeed a great many ridiculous stories have been related to the world^(b), which, however, upon a little reflection either obviate themselves, or else are contradicted by those facts that occur. May we not exemplify this observation by the case of twins now related? One of the children was perfect, and is still living; the other proves to be remarkably defective. Does not the question naturally arise here, how could one child be affected by the disturbed imagination of the mother and not the other? But the mother, upon repeated examination, recollects no fright in particular while she was pregnant. Neither, if she did, would it all invalidate the force of our argument upon this subject; for she could not possibly see any child without a head: and more especially, because other parts, as the *viscera* and *medulla spinalis*, were equally defective, which are entirely out of the reach of the eye or imagination of the mother to form any idea about them. To elucidate this point still further, can any candid person possibly suppose, that the casual agitation of mind of a pregnant woman, should either produce or destroy a whole system of blood-vessels, nerves, and fibres, which are indispensable constituents of almost every part of the

(b) MAURICEAU, p. 53. Obs. 64. Ibid. p. 63. Obs. 118. SMELLIE'S Midwifery, vol. III. p. 402. Philosophical Transactions, 1684, N° 160. p. 599. Ibid. 1739-40, N° 456. p. 303. and 306.

body? And may we not adduce one proof more, in support of our argument, from what happens to animals and vegetables? Among these also, such extraordinary deviations from the general course of nature are by no means uncommon: yet the former are possessed of a much less share of imagination than is generally allotted to the human species; and the latter have none at all. Reasoning in the same manner upon several occasions of this kind in which I have been concerned, my conclusions have always been similar; *viz.* that the usually assigned cause of the mother's imagination is by no means equal to the manifold effects produced. And on the other hand, this injurious doctrine is pregnant with continual mischief to society. It frequently makes women very unhappy. And the fear of mutilating or marking their infants often affects them so much, that they at last miscarry. Having therefore indubitable facts to go upon, and the cause of humanity so powerfully coinciding with the truth, is it not right to affirm and maintain with confidence, that neither the longing nor frightened imagination of the mother appears to have any power at all to imprint marks or monstrosity upon children? That this is a very weak supposition, entirely void of foundation, directly contrary to all philosophy and experience, and has nothing to support it but a vulgar opinion, transmitted to us from the ages of anatomical ignorance? And is it not more reasonable to conclude with you, SIR, in your extensively useful lectures, that whatever be the defect or deformity in a monstrous birth, it can never be

occasioned by accidents of any kind during pregnancy; but probably has its existence always originating, *causâ adhuc incognitâ*, in the first stamina of the embryo⁽ⁱ⁾?

Thus, SIR, I have faithfully related the particulars of this singular phænomenon among the human species, which, to a demonstration, confirms your opinion, that the nourishment of the *fœtus in utero* is principally by means of the *funis umbilicalis*. M. MERRY observes, that defective monsters are more instructive than others that have redundancies^(k). If this be true, here is still an ample field for speculation, notwithstanding the few very obvious remarks which I have already ventured to make. In conformity to the general language of authors, I have in this essay occasionally adopted the use of the term *monster*. There is, however, something in that word extremely repugnant to our common feelings, and very apt to leave a terrifying impression upon the mind. Why may not the Author of Being sometimes produce variations in the human species, as well as in the animal and vegetable kingdoms^(l), and equally exempt too from such frightful appellations? Would it not, therefore, be more eligible in the present instance, and every similar one, to explode the common term, and call it simply

(i) The great baron HALLER is of opinion also, that this is evidently the case in that species of monsters to which parts are added. Vide Opera Minora HALLERI, tom. III. p. 148.

(k) L'Académie des Sciences, Hist. 1720, p. 13.

(l) See F. LICETUS. J. PALFYN des Monstres, &c. in which are many instances of each kind.

a *lusus naturæ*; or with PLINY to say, “ *Hoc nobis miraculum, sibi ludibrium, ingeniosa finxit natura.*”

The peculiar share of your friendship, with which you are pleased to honour me, makes me flatter myself that you will give me credit for the truth of any facts advanced in the course of the detail, that are not irrefragably evidenced by a recourse to the preparation in its present state.

I am, &c.

Norfolk-street,
June 6, 1774.